

## That Cry-- "Oh, My Back!"

The little missionary, Doan's Kidney Pills, "free trial," carries ease, rest, comfort. Most people need kidney help; they who choose Doan's get it--help that lasts.

DEARFIELD, IND.--"When I sent for the trial box of Doan's Kidney Pills I had been afflicted for two months with pain in my back so bad that I could not get from the house to the barn. It was called rheumatism. I could get no relief from the doctors. I began to improve on taking the sample and got two boxes at our druggist's, and, although 68 years of age, I am almost a new man. I was troubled a good deal with my water--had to get up four and five times a night. That trouble is over with and once more I can rest the night through. My backache is all gone, and I thank you ever so much for the wonderful medicine, Doan's Kidney Pills."--Jno. H. HUBB, President Ridgeway, Indiana, State Bank.

BELDING, MICH., Jan. 14, 1903.--"I received trial box of Doan's Kidney Pills. They did me lots of good. I can now go to bed and lie on my right side--the pain there is all gone, also the stomach distress and belching of gas is all stopped, with the use of two boxes."--Mrs. E. S. BIRM, R. F. D. No. 2, Reading, Mich.

## Denver Directory.

### SADDLES and HARNESS

They cost you nothing for examination. \$20 double harness with breeching for \$22; \$40 double team harness with breeching for \$42; \$60 steel horn saddle with breeching for \$62; \$80 steel horn saddle with breeching for \$82. Do not be deceived by worthless imitations but send your order direct to us and get the best genuine oak leather harness. For examination before paying, free. All goods stamped FRED MUEHLER, 1415 1/2 Larimer Street, Denver, Colorado.

THE DENVER TENT AND AWNING CO., Platts, Hammocks, Ore Sack, 1121-1124 Larimer Street.

Financial Contract Security Co. We pay 4 per cent. interest. DEPOSIT BY MAIL.

VIOLINS. SEND for LIST of SECOND-HAND INSTRUMENTS. It will pay you. L. RUSCHENBERG & CO., 1245 1/2 St., Denver, Col.

TRUNKS. TRUNKS. TRUNKS. Write for Ill. Catalog. The A. E. MEER TRUNK & BAG CO., 16th and Lawrence sts., Denver, Colo.

Fidelity Savings Ass'n. Has over \$200,000. SEND FOR 5 PER CENT. DEPOSIT PASS BOOK.

STOVE REPAIRS or every known make of stove, furnace or range. GEO. A. FULLEN, 1331 Lawrence St., Denver. Phone 745.

AGENTS. Wanted to sell our Nursery Stock. Special inducements to local agents. NORTHERN NURSERY CO., DENVER, COLO.

SEEDS. We have put to a fresh and complete stock of Field and Garden Seeds. We carry nothing but the best--No Old Seed to offer. Carry also Rice, Dairy and Poultry supplies. Write for Catalogue. Mailed Free to all. THE L. A. WATKINS MERCHANDISE CO., 1535 to 1531 Wazee St., Denver, Colo.

Piles. NO PAY TILL CURED. No knife. Cure guaranteed. 12 years' experience. Write for free book and investigate my treatment and work done here in Colorado. DR. J. F. BOWERS, 10 North Block, DENVER, COLORADO.

RELIABLE ASSAYS. Gold..... \$75 Gold and Silver..... \$1.00 Lead..... \$75 Gold, Silver, Copper, Lead. Prompt Return on Mail Samples. OGDEN ASSAY COMPANY, 1728 Arapahoe Street, DENVER, COLORADO.

E. E. BURLINGAME & CO., CHEMICAL ASSAY OFFICE AND LABORATORY. Established in Colorado, 1866. Samples by mail or express will receive prompt and careful attention. Gold & Silver Bullion Refined, Milled and Assayed OR PURCHASED. Concentration Tests. 100 lbs. or car load lots. Write for terms. 1736-1738 Lawrence St., Denver, Colo.

DENVER BEST SOAP. Absolutely pure. Send for our New Premium List. The Glycerite Soap Mfg. Company, Denver.

COLORADO College. Complete in all departments. Lessons by Mail. Catalog and Trial Lessons Free. Denver.

It is afflicted with Thompson's Eye Water.

## Bromo-Seltzer

Promptly cures all

## Headaches

## WESTERN SEEDS FOR WESTERN PLANTERS

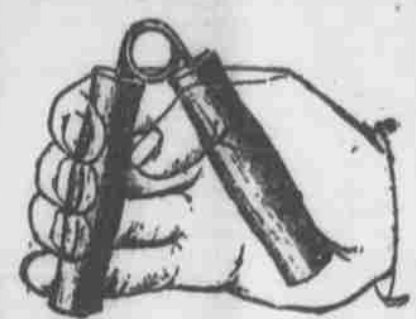
New Eighty-Page Illustrated Catalogue Free. Write To-day.

### BARTEDES & CO., 1521 Fifteenth St., Denver, Colorado.

## POPULAR SCIENCE

### Spring Wrist Grip Apparatus.

These grips for adults, as illustrated in the Iron Age, have handles 4 1/4 inches long and 3/4 inch diameter in centre, the tension being furnished by two coils of nickled spring wire 5-32 inch diameter, the handles having a shellac finish on light wood, or ebonized, as desired. The size for children is of the same general proportions in diameter, but an inch shorter in



### Wrist Grip, With Coil Springs.

length, with nickled wire a little less than 3-32 inch diameter. The same company also makes a grip on this principle with a wire attachment applied to one handle, in the end of which is a loop to connect with elastic woven cord exercises used in connection with pulleys.

### Gold from Poor Rock.

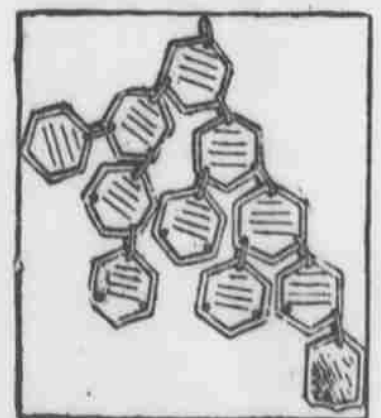
About the nearest approach there is to manufacturing gold, says the Mining Investor, goes on night and day in the Black Hills. Occasionally bunches of very rich rock are found there, but 90 per cent of the ore is of low grade, running from \$2 to \$10 per ton, with the average under \$5 per ton. This grade of rock, however, is there in such vast quantities that it can be handled economically. In the old days the ore treatment consisted in crushing the rock under the stamps and collecting the free gold on the plates. This, of course, did not make very clean saving, and as the workings became deeper the rock was more and more refractory. Then the cyanide method was tested, and found to be just what was wanted. It is estimated that millions upon millions of dollars' worth of gold have in the past been allowed to wash down the gulches practically, and that all of this could have been saved had the cyaniding system been in use. It is principally this which has given such an impetus to mining in the Black Hills in the last two or three years.

### United States Topographic Survey.

The United States Geological Survey is diligently prosecuting its topographical survey of the United States. Besides the topographic sheets, there are sheets for land classification, geology &c. The atlas sheets are 16 1/2 by 20 inches, engraved on copper and printed in three colors. The cultural features such as roads, railways, cities &c., as well as all letterings, are black, all water features are blue, and the hill features are shown by brown contours. The sheets can be bought for five cents, or in quantities for two cents per sheet. During the last fiscal year, 35,123 square miles were surveyed in thirty-two states and territories, 12,407 miles of levels were run, 1,338 permanent bench-marks established, &c. In Alaska 6,500 square miles were mapped. Up to the present time, 866,847 square miles of the area of the United States have been surveyed--about 29 per cent of its surface.

### Genealogical Chain Record.

Any one who has ever made the attempt to trace their family record knows that there is a curious fascination about it, and it is with considerable pleasure that each link is discovered which connects the present with time long past, especially if it be found that some ancestor held a prominent position in affairs, either as a statesman, soldier or business man. Numerous devices have been



Linking Past and Present Generations. thought out for the convenient recording of the names and history of these ancestors, the chief difficulty being that in bringing all branches of an ancient family down to the present, the branches are so numerous that it is hard to join them all to the one head in a form easily traceable. Patience Williams Gee of New York City has designed a system of links and tablets which is practically limitless as to length and number of names which may be recorded, an illustration

of the idea being presented herewith. In tracing a direct line the tablets are connected one to the next by small rings or links, the branches being indicated by additional records attached at intervals around the tablet. One tablet of individual shape is provided to make prominent the owner's name, and each record contains a space for the main facts of the person's history. If desired a card system can be used in addition, a number on each tablet referring to a corresponding card, where a complete history can be recorded.

### Stockings With White Feet.

A physician, in a published interview, says the Indianapolis Journal, urges that the wearing of stockings with white feet will do more to promote ease in walking and relieve foot ills than anything else to be suggested. Socks or stockings of lisle or cotton thread in black bind the feet and make them swell, he says, no matter how fine and open they may be. The black dye with the hard thread of the lisle variety is a combination that is particularly torturing to tender feet. Thin, unbleached balbriggan he recommends. Preferably the whole sock or stocking may be white, but at least the foot should be. A further caution is added that new cotton undergarments, should be washed before being worn, to take out the sizing used by manufacturers.

### Acetylene Gas Generator.

The primary object of the invention here presented is to provide an acetylene gas generator which is adapted to use in hand lanterns of the character used by switchmen and railway trainmen without the necessity of increasing the size of the lantern. What is here shown is the generator complete, ready for insertion in a lantern in place of the common oil reservoir, thus making it possible to utilize the frame of the old lantern when changing from oil to gas as a lighting mechanism.



### For Use in Railway Lanterns.

The apparatus consists of the usual carbide basket, surrounded by water chamber, and has a clamping device at the base to secure it in the lantern. Directly beneath the carbide basket is a valve leading from the water reservoir to the generating chamber, consisting of a flat pad fitting over an opening in the metal bottom. When the water pressure is greater than that of the gas the valve lifts a short distance and allows a little water to flow to an absorbent pad surrounding the opening, and the contact of the carbide with this pad generates gas until the pressure has increased to the point necessary to shut the valve again and stop the flow of water. The whole arrangement is a simple one and can be readily taken apart for cleaning and refilling, and the weight is but little more than that of the oil lamp. Frank M. Moore of Providence R. I., is the inventor.

### The Great Red Spot on Jupiter.

During the years 1901 and 1902 the great red spot on Jupiter (which has been known at least since 1857) has moved at an accelerated rate. For about twenty-three years uninterruptedly, the spot has exhibited a constantly increasing retardation which caused its rotation period to lengthen from 9 hours 55 minutes 34 seconds to nearly 9 hours 55 minutes 42 seconds. In 1901 it declined to 9 hours 55 minutes 41 seconds and during the present year the rate has been about 9 hours 55 minutes 39 1/4 seconds. This increase of velocity has been contemporary with the outbreak of a large irregular or multiple marking in the same planetary latitude as the red spot. The new object, first seen in May, 1901, has a rotation period of 9 hours 55 minutes 18 seconds. In the summer of 1902 the red spot was almost surrounded by the material of the new marking and the quicker motion of the latter may have accelerated the movement of the former. At any rate the change of rotation time is significant and the situation of the new marking suggestive. There is no terrestrial analogy to the red spot of Jupiter so far as known.

The forest reserves of the United States now aggregate an area almost twice that of the state of Pennsylvania.

## HUMOR OF THE DAY

### Nothing New.

A gentleman telegraphist "called" a young lady operator in another office repeatedly without response. At last the "click, click" came, and he telegraphed vehemently:

"I have been trying to catch you for the last half hour!"

The maiden wired back:

"That's nothing. There is a young man here who's been trying to do the same thing for two years and he has not caught me yet."

### Exception to the Rule.

"Them two dudes," the girl at the music counter remarked, "is trying to get me to look at 'em.'"

"Where's your grammar?" said the girl at the book counter. "Two dudes" is plural.

"I guess not!" contemptuously rejoined the other. "It takes more than two of them fellows to make a plural."

### What Worried Jones.



"No, gentle reader, Mr. Jones is not under the influence of liquor. Mr. Jones is merely trying to come down a moving staircase that is moving up."

### As to Sex.

Towne--I see there's a western scientist who declares that the insect which says "Katie did" is the male, and the one that says "Katie didn't" is the female.

Henpeck--That's all nonsense, because if you'll notice the one that says "Katie did" frequently had the last word. I'll bet they're both females.

### That Settles It.

"I see that some one is advocating the project of a newspaper printed in a compact tabloid form like a book," said Mr. Torque.

"The very ideal!" cried Mrs. Torque; "it's simply ridiculous."

"In what way?"

"Why such a paper would be simply useless to put under a carpet."

### Not a Question of Faith.

Patient--Although, doctor, I have sent for you at the earnest solicitation of my friends, and to please them, let me tell you that I have not the least faith in modern medical science.

Physician--Oh, that doesn't matter at all, I assure you. The mule has no faith in the veterinarian, yet the latter cures him just the same.

### Used to It.

Towne--You don't mean to say you didn't notice that earthquake shock?

Browne--I guess I was home in Alghurst at the time.

Towne--But the shake must have been perceptible there.

Browne--I guess all of us just took it for our malaria.

### Extremely Rare.

Tommy--Pop, what is meant by the sense of humor?

Father--The sense of humor, my son, consists largely of knowing when not to be funny.

### Those Sales.



"Reginald, we're all through shopping, except--my slippers, some dishes, a hat, a gas stove, a piano--"

### Natural Inference.

Madge--What in the world induced her to elope?

Marjorie--As she's every day of thirty, I fancy her parents put her up to it.